

# Narratives, Sensemaking, and Didactic Relationships in Longitudinal Integrated Clerkship Education

Abigail Olajire<sup>1</sup> and Mark Benton<sup>2</sup>

<sup>1</sup>Department of Communication, University of Missouri, Columbia, MO, USA. <sup>2</sup>Center for Health Policy, University of Missouri, Columbia, MO, USA.

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## ABSTRACT

**OBJECTIVE:** To understand what longitudinal integrated clerkship (LIC) participants found meaningful and valuable about their experiences while grounded in a communicated narrative sensemaking (CNSM) framework.

**METHODS:** Semi-structured interviews were conducted with a cohort of 3 LIC students and 7 of their 12 preceptors. Interviews were designed to elicit narratives ie time-ordered accounts of events, experiences, or reflections. Narratives were identified and coded to understand aspects of experiences.

**RESULTS:** Participants made sense of their experiences by narrating stories of LIC length allowing relationships to grow over time in a way that gave students a holistic perspective on patient care, built deep relationships between students and preceptors, and grew student confidence.

**CONCLUSION:** Participants value longitudinal integration in LICs because it allows for unique perspectives on patient care and builds deep meaningful mentor relationships with preceptors. Relationships in LICs must be managed carefully because much LIC learning is facilitated by relationships. The clerkship is a crucial aspect of medical education of which sense will be made by physicians during their whole lives.

**KEYWORDS:** LIC, relationships, narrative, sensemaking, longitudinal integration interviews, longitudinal

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**CORRESPONDING AUTHOR:** Mark Benton, Center for Health Policy, University of Missouri, Columbia, MO, 65211, USA. Email: mbenton@mail.missouri.edu

## Introduction

### *Longitudinal integrated clerkships*

Longitudinal integrated clerkships (LICs) are becoming increasingly popular as a model of intensive medical education across the world.<sup>1–3</sup> Clerkships mostly take two forms, block and longitudinal integrated. Students in block clerkships learn in one medical specialty at a time by spending a set period in each specialty. LIC “students participate in the provision of comprehensive care of patients over time, participate in continuing learning relationships with these patients’ clinicians, and meet the majority of the year’s core clinical competencies...through these experiences.”<sup>4</sup> LIC students report greater confidence in their patient skills,<sup>5–7</sup> and patient interactions provide rich material for professional identity construction,<sup>8</sup> idealism, and advocacy.<sup>9</sup> Overall, LICs create contexts that encourage students’ sense of patient responsibility.<sup>10</sup>

LICs students are paired with one or more preceptors. Researchers<sup>11</sup> outline the benefits of this aspect of the model. The relationship between the students and supervisors propels a level of informality, which students perceive as creating an atmosphere of authenticity.<sup>11</sup> Relationships benefit preceptors, who gain improved morale, and patients gain additional and more holistic care. Research recommends careful consideration

and preceptor involvement during LIC student recruitment to optimize relational potential.<sup>12,13</sup>

Despite the plethora of studies that have evaluated the benefits of the student/preceptor relationship and LIC experiences, research incorporating the communicative processes that reflect them are sparse. Further, few studies have evaluated the narratives of LIC students and preceptors, and these narratives describe the personal and interpersonal processes involved in LICs. Medical clerkships are important professional experiences and the stories that people communicate demonstrate what they find valuable, beneficial, and meaningful about them.

### *Communicated narrative sensemaking*

This study is grounded in the Communicated Narrative Sensemaking (CNSM) theoretical framework expounded by Koenig Kellas & Haley Horstman<sup>14</sup> in their explorations of family life. Their framework draws from communicated sensemaking (CSM) and sensemaking theories.<sup>15</sup> The base assumption of CNSM is that humans describe their experiences using narrative to make sense of their lives because it allows for information to be internalized and communicated.<sup>16,17</sup> Narratives serve as valuable research data.<sup>14,17</sup> Koenig Kellas<sup>14</sup> describes the framework “investigates the content, process, and outcomes of narratives and storytelling and identifies explicitly the



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communication behavior that affects and reflects storied sense-making and well-being.” Retrospective sensemaking narratives reflect narrators’ identities, self-understandings, beliefs, values, behaviors,<sup>18</sup> and the way they “practice health and engage in risk.”<sup>14</sup>

CNSM is a suitable grounding to explore how LIC participants come to create value and meaning in their interactions, learning, and relationships. LIC students and preceptors see LICs as developmental<sup>19</sup> in particular because of formative relationships,<sup>20</sup> but what is valuable and meaningful about development and relationships is less explored.

### *Research statement*

This study draws on narratives from LIC student and preceptor interviews to understand the meaning and value they assign to their LIC experiences. Participant narratives were analyzed in a CNSM framework. Analysis especially highlights the significance participants assigned over a career to the LIC occurring over an extended timeline, particularly for seeing patient care from a new perspective and building deep relationship.

## **Methodology**

### *Research ethics*

This project was approved by the authors’ university IRB, project number 2092435, with an exempt determination. Written consent was not obtained because an oral consent process was approved.

### *Project background*

The second author participated in a Health Services and Resources Administration (HRSA) grant-funded project with the Office of Health Outreach, Policy, and Education (HOPE) at the University of Missouri serving external evaluator support functions. As part of that project, a formative evaluation (an evaluation conducted in the early stages of a new program to understand the fidelity of its implementation and its effects on participants) of the first cohort of the LIC program was performed.

Students within the program apply for a longitudinal clerkship. Two to four students are selected per LIC site depending on reported anticipated site capacity. The LIC is currently present at three sites but was in its pilot formative year at a single site at the time of research. The LIC occurred at a rural health center with sites throughout two counties totaling a little over 100 beds. Their main site is in a community of about 20 000 people. Students in the LIC spend 11-12 weeks learning in intensive inpatient hospital-focused settings and 32-33 weeks learning in ambulatory outpatient clinic-focused settings. All clerkship students work in specialties of family medicine, internal medicine, obstetrics and gynecology (OB/GYN), neurology, surgery, pediatrics, and psychiatry. LIC

students have the same learning objectives as block clerkship students. LIC students are encouraged to work with their preceptors and other physicians to gain additional experiential clinical learning and sites are encouraged to facilitate this experience.

### *Interview guide design*

Units within HOPE have been long dedicated to medical education,<sup>21</sup> but they implemented the first cohort of a LIC in the 2021-2022 academic year. Because the initial cohort was small with 3 students and 12 preceptors, a qualitative interview approach was employed.

Prior to designing a semi-structured interview guide, the evaluation researcher engaged in a process of familiarization to understand the LIC. Program administrators and staff were then engaged to design an interview guide to improve validity by incorporating multiple perspectives into the questionnaire design process.<sup>22</sup> Based on these examinations and conversations, the interview guide focused on three main concepts: 1) perspectives on rural healthcare (e.x. “What sorts of things can you do at a rural LIC site that you couldn’t do in other contexts?”), 2) perspectives on caring for patients (e.x. “Can you tell me about a time or times when someone here went the extra mile for a patient and/or their family?” and 3) continuous long-term engagement with site, staff, and patients in all specialties eg longitudinal integration (e.x. “What has been effective or ineffective with students working in different specialties at once over time? *Probe*: Do you have any examples?”) Staff agreed with the content of the guide but made several suggestions for language improvements to match the guide more precisely with the context of the clerkship. Full interview guides are available in the appendix.

### *Interview context*

Inclusion criteria were for participants to be 18 and older and participating in the LIC as a preceptor or student. Program staff furnished a list of participants with their contact information. Participants were contacted via email and telephone to schedule interviews and conducted interviews with recorded teleconferencing and telephone. Interviews were conducted by the second author between August and September of 2022. The second author has PhD level training in qualitative methods and analysis. Researchers offered no incentivization. Recruitment was conducted until the goal response rate of 50% of preceptors and 100% of students was exceeded. The intent of this goal was to reach saturation on stories participants told, referring to reaching a point after which no new additional kinds of experiences are shared. Individuals’ stories are unique but as participants are added to a qualitative research project from the same context the contents become patterned in a way that results in redundancy.<sup>23</sup> After interviews, recordings were transcribed. Transcripts are verbatim, including repeated

words, stuttering, pauses, and interviewer speech, to preserve participants' voices and conversational flow.<sup>24</sup>

### Analysis strategy

This study adopts the thematic analysis of communicated sense-making narratives. The information in the narratives that participants told is shown to exemplify what stood out as most important to participants' experiences. Thematic narrative analysis focuses on interpreting the content of narratives with the understanding that they are used to make sense of lived experiences. "Language is used as a resource rather than a topic of inquiry."<sup>24</sup>

Each transcript was read to identify narratives, defined as a retrospective time-ordered account of events, experiences, or reflections that occurred during the clerkship year. Narratives were inductively read for themes while creating theme names and definitions, and each narrative was assigned a theme describing the information it communicated. When first round of theming was complete, narratives were again read to ensure they were in the theme most reflective of their contents. Examples of themes include "motivation" for stories that demonstrated why participants chose to participate in this program, "perceptions of rural health" for stories that demonstrated how rural healthcare is unique, and "longitudinal integration" for stories that described how the long-term, continuous, simultaneous-specialties structure of LICs influenced how the program was experienced.

In the process of research, it became clear that participants and program partners viewed the longitudinal integration aspect of the program as valuable. After conversations with program and administrative staff, these findings were identified as of sufficient importance and interest for scholarly dissemination. Because participants in and around the project directly and explicitly communicated that found it meaningful in and out of interview contexts, this study focused on the longitudinal integration theme.

The longitudinal integration theme is defined as a story about the long-term, continuous, simultaneous-specialties structure of LICs. Stories within this theme were assigned sub-themes based on whether they were more focused on longitudinal participation (clerkship students being at the site for an extended period) or integration (working over different specialty areas). Overall, 60 total preceptor narratives were identified: 19 were about longitudinal integration, with 10 about longitudinal aspects and 9 about integration aspects. 45 student narratives were identified: 22 were about longitudinal integration, with 6 about longitudinal aspects and 16 about integration aspects.

### Member checking

A copy of this research and a final evaluation report were provided to LIC staff, program leadership, and their supervisors to

improve the credibility of findings by ensuring consistency with their experiences.<sup>22</sup> They each individually provided comments in one-on-one emails but agreed with the overall findings. In a group email, program leadership and supervisors strongly agreed that clerkships were formative processes of which sense would be made throughout the duration of a physician's practice.

## Findings

### Participants

Table 1 shows characteristics for the sample. Pseudonyms are used to protect participants' privacy while facilitating personalization.<sup>24</sup> Forty percent of participants were female, and all participants were from the United States. Sixty percent of participants had their hometown in Missouri while 30% were from a nearby state and 10% from a coastal state. Seven of twelve preceptors were interviewed for a response rate of 58% and 3 of 3 students for a response rate of 100%, for a total response rate of about 67%. On average, interviews were of a length of about 38.25 min. For preceptors, interviews were on average about 30.33 min and for students were about 56.67 min.

### Student-patient relationships

The longitudinal aspect of LICs was important for participants' interpretations of what those programs impart. Students' and preceptors' narratives demonstrate the high value they are assigned to having a longer timeline to accomplish learning. Brook narrated:

**Table 1.** Participants and characteristics.

Pseudonym	Student or Preceptor?	Specialty	Reported Years in Medical Field (including medical school)
Shelly	Preceptor	Pediatrics	10
Shawn	Preceptor	General Surgery	35
Michy	Preceptor	General Medicine/ Family Practice	8
Jackson	Preceptor	Anesthesiology	15
Bryant	Preceptor	Internal Medicine	38
Andrea	Preceptor	General Medicine/ Family Practice	8
Alan	Preceptor	OB/GYN	24
Mikey	Student	(-)	(-)
Michon	Student	(-)	(-)
Brook	Student	(-)	(-)

**Brook (Student):** There were several patients that when I arrived were kind of in the beginning stages of their pregnancy, so I got to follow them throughout their pregnancy, be there for their deliveries, and then follow them and their baby afterwards. That was a really great experience to, you know, watch their belly grow over time, be there for the delivery, and then watch their baby grow. To watch the little family grow. That was an amazing experience for me...You know I had some kids that I followed, not just babies, but like older kids. Watching them grow was, was cool.

A typical clerkship would not be long enough for a student to observe much of a pregnancy. Block clerkships do not place students with the same patients continuously as is the case in LICs. A student in a block clerkship might work with a pregnant patient during the relevant block but will move on to another specialty area with new patients at its end.

An extended clerkship length allows students to interact with patients on an atypically long timeline. Beyond that, a longer clerkship gives students more chances to interact with patients in a way that improves patients' experiences. Shelly described:

**Interviewer:** So, looking at this longitudinal integrated clerkship what are some of the things that students can do that maybe they couldn't do in other settings?

**Shelly (Preceptor):** They get to know their patients better. So they can follow the same patient for the entire year that they're here. And kind of, the whole realm of what they're having done from just regular clinic visits if they're going to surgery, if they're in the ER, and so I think they just get a lot more hands on experience and just get to know everybody a lot better...I think they enjoy having someone else to talk to, and someone else who takes interest in their life or their kids' lives. Um, and a lot of times the students have more time to just kind of get to know them and chat. They have a little bit more time to spend with them than I necessarily do in their clinic appointment. They all seem to respond really positively to it.

LIC students work with the same patients continuously, which provides opportunities to know patients on a personal level. Not only can LIC students work with the same patients, but each visit allows students to learn more about patients.

Brook's narrative demonstrates a recognition of the unique opportunities provided by a longer clerkship, and Shelly communicates the implications for patient care. Preceptors narrated a similar recognition, with one reporting:

**Interviewer:** Okay. And could you maybe talk about a couple of the things that students can do with the uh, clerkship site that you don't think they could do in other settings, and we had talked about some of this, I think-

**Andrea (Preceptor):** -Yeah, right...The longitudinal aspect of it is just fantastic, because, you know, in traditional medical school rotations you get to know a patient, you know, over an acute illness, and then you leave...Here they get the opportunity to: I saw the patient in the hospital, and then I saw them in clinic with follow up with either myself or cardiology, or whatever. So they, they really get

to see what it's like to follow a patient throughout a year of their life.

**Interviewer:** Yeah. And I think what quote someone gave me was, "If you're interested in OB/GYN, if you time it right, you can see the whole pregnancy and birthing process basically from start to finish."

**Andrea (Preceptor):** And when they're with Dr Johnson, they also get the very cool experience of being baby's pediatrician.

After a prompt to triangulate information from a previous interview, Andrea narrated that the LIC provided students with opportunities around pregnancy and pediatrics. Providing care over this timeline helps students see healthcare from a more comprehensive perspective.

Students' relationships with patients provide formative experiences for their future practice. Working with the same patients imparts a unique perspective by allowing students to observe a person with healthcare needs as those needs develop and require different kinds of care. Students also build relationships with preceptors over a long uninterrupted timeline.

### *Student-preceptor relationships*

Students' relationships with preceptors are crucial for their LIC experiences. Student-preceptor relationships become stronger as interactions between the two occur throughout the LIC. Shelly explains:

**Shelly (Preceptor):** I think the most effective thing was that they were able to spend that year seeing so much. I think their education benefited from it. But I think our evaluation of our understanding of what they're capable of benefited too. It's the really knowing what they were capable of by the end of the year versus, in the traditional sense even if I'm getting a student at the very end of the year on day one, I'm still not going to know when I send that person in, are they going to do a good job? Whereas here, by the end of year, I knew that they were.

Here, Shelly narrates the LIC experience as one where relationships are built over the duration of the program. This process facilitates preceptors growing to trust students' skills and competencies as they see them learn and grow.

As preceptors gain confidence in students' skills, students' confidence grows. Brook expressed similar sentiments as she narrated advantages of having such a strong relationship:

**Brook (Student):** I think that part of it, especially in the LIC is that, you know, I spent a year with those physicians and so they really got to know me trust me and work very, very closely with me. And so I think because of that they really grew to trust us in our skills, because they knew that they had trained us well...so in the ER the first several times that I would go, somebody, you know, they would watch me and kind of talk me through and make sure I knew what I was doing. You know, by halfway through the year, the physician would look at me and be like "okay, there's a laceration in that room, so take care of it." I'm like, "Yes, sir. Yep, got it."

Brook narrates that her relationship with her preceptor built over the year and opened learning opportunities she otherwise would not have had. The change in their relationship signified her advancement in skills and her confidence grew.

One student, Mikey, narrated the development of the student–preceptor relationship over the course of the LIC:

**Mikey (Student):** Being LIC students, we’re interacting with all of these physicians, and we see them so regularly, and again we don’t have that disparity of time where we see them for a month then we don’t see them the rest of the year. We’re seeing these providers all the time...you really feel like you’re part of a family. And that’s, that’s how I felt and I don’t think there was ever a time where I felt like an outsider...by the end of the year and, and my colleagues can attest to this as well as they were there, it was it was emotionally moving for them. They were, they were sad to leave. They’re like “I can’t, I can’t imagine leaving this hospital, I can’t imagine leaving the people that I’ve grown to know and appreciate and work with for the last year.” We all had mentors, we all had people that were so invested in our education and success.

Mikey contrasted the LIC with a block clerkship; whereas a block clerkship student may see a preceptor “for a month” and then not “see them the rest of the year,” a LIC student “sees providers all the time.” In the LIC, preceptors become mentors and a hospital site becomes a family.

Michon similarly narrates a recognition of the professional and relational implications of an extended clerkship for preceptors, students, and their relationship:

**Michon (Student):** Um, I still, I still speak with, um, multiple members of the hospital community. Um, they just really put all their effort and time into educating us as students. Like they put hundreds of hours into educating us, uh, when they didn’t have to and with that I mean, when I would show up early in the morning and, and come in at night, you know, having a student, it’s still work for the attending. I mean, I think towards the end of the year, hopefully I was more helpful than I was work but especially at the beginning of the year, it takes work to educate a student and to, um, have a student be around you and to interact with a student, um, and they were all so wonderful...the chief medical officer he, he was so wonderful. Um, everybody just really came together as a family...I’ll be going back in March to complete a rotation there and I’m so excited, um, because I really miss them. Um, they’re like the best mentors that I, uh, could’ve ever asked for and I think they will be lifelong mentors. So I’m really, really fortunate to have that.

Michon developed skills and confidence over time, and as she required less oversight her relationship with her preceptor changed to one that was more helpful than hindering. By the end of her clerkship, she felt close enough to describe colleagues as family, anticipated a lifelong relationship, and would return to the site.

## Discussion

Findings highlight and reinforce what LIC participants find valuable about their experiences, especially the importance

they assign to building relationships over an extended timeline. Preceptors value the opportunities to see students think through, perform, and succeed at tasks, which allows for increased comfort in additional responsibility and autonomy. Students value their strong attachment to their site and its staff, the unique perspective they acquire on patient care, and students who return might achieve even deeper learning because of their relationships.

Several participants pointed out the positive implications of LICs for OB/GYN and pediatric care for gaining a comprehensive perspective. LICs allow for variation in medical condition seasonality and progress in long-term needs. This could be especially impactful in pediatric specialties where respiratory illnesses are highly seasonal and unique development occurs between birth and age one. It is also important in OB/GYN where healthcare needs develop over a longer timeline than interrupted clerkships allow. LICs seem well suited to exemplary learning in pediatric and OB/GYN specialties.

This study contributes to CNSM research by extending the applicability of CNSM beyond the family life setting to medical education organizations. Participants communicated stories of their experiences with implications for identities, emotions, and relationships. Sensemaking around clerkships occurs well into physician–preceptors’ medical practices. Preceptors reflected on and made sense of their clerkship experiences and the experiences of their students. A medical clerkship is a formative phenomenon of which sensemaking will occur over a lifetime.

## Challenges and limitations

This study faces some limitations. First, only three students and seven preceptors were interviewed in this study. The potential pool of participants was small given the overall size of the program. It may have been that on-site, rather than virtual/telephone, recruitment would have achieved a higher response rate. This may have allowed for longitudinal observations and a higher degree of storytelling, resulting in a higher degree of saturation. This also could have facilitated a formal piloting of questionnaires on participants, which was not performed.

Second, the first year and formative context of the research may limit transferability. Qualitative research usually does not aspire to generalization to all places, times, and contexts. Instead, it provides contextual understandings of peoples’ experiences, emotions, and values to understand topics and processes, especially from a CNSM perspective. Readers should not necessarily assume that findings automatically apply to their contexts. This research has case-to-case transferability, meaning readers should carefully consider if its context applies to their own before considering the applicability of findings.<sup>25,26</sup>

## Conclusion

This research highlights the value of the relationships between students, patients, and preceptors during a longitudinal

integrated clerkship. A clerkship is a time of great significance for medical students and physicians of which sense will be made over a lifetime, in part because of meaningful experiences and relationships created during a clerkship. Being on a medical site alone is not what grants LIC students access to medical learning. Instead, it is their relationships with their supervisors and patients and the value they assign to those relationships.

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### Supplemental material

Supplemental material for this article is available online.

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